

### **REMARKS**

Claims 1 to 20 have been rejected. Claims 1 and 5 have been amended. Claims 6 to 20 have been canceled. Claims 1 to 5 are, therefore, presently pending in the application. Favorable reconsideration of the application in view of the following remarks is respectfully requested

#### **Rejection of Claims 5, 7, 8, 9, 16, 19-20 under 35 USC § 112:**

Claim 5, 7, 8, 9, 16, 19-20 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner states that the use of term "most preferable" render the claim unclear with respect to the scope of protection sought for grain thickness in claim 5.

Claims 6 to 20 have been cancelled. Claim 5 has been amended above to render the claim clear with respect to grain thickness.

#### **Rejection of Claim 1 under 35 U.S.C. §37 U.S.C. 102(b):**

Claim 1 has been rejected under 35 U.S.C. 102(b) as being anticipated by Ishikawa et al (Ishikawa). The Examiner states that the material of Ishikawa in columns 119-120 contains silver halide within the amount of 1.19 g/m<sup>2</sup> within the scope of the claimed invention. The Examiner also notes that the binder is gelatin, and the material contains blue, green and red sensitive layers.

The present claim 1 has been amended to further require that the radiation sensitive silver-halide emulsion imaging layers comprise a blocked developer, a light sensitive silver halide emulsion, and a non-light sensitive silver salt oxidizing agent, wherein the fraction of silver as silver halide relative to total silver (including both silver halide and silver donor) is from 30 to 85% by weight, and wherein the photothermographic element is a film designed for scanning with film scanners such that, following completely dry thermal development, the film forms a  $D_{min}$  density of no more than 2.0, a  $D_{max}$  density of no more than 4.0 and a  $D_{max} - D_{min}$  density change of at least 1.0 in each color record. Experimental evidence in Examples 3 shows that this type of film results in improved image quality after scanning.

Ishikawa, in contrast, although disclosing a similar level of silver halide in a photothermographic film, involves a completely different film that, after imagewise exposure, cannot be thermally developed in a dry state without

the application of solvents or aqueous solutions. Consistent with this fact, the element or film according to the present invention, the presence of the organic silver salt is necessary for completely dry thermal development.

**Rejection of Claims 1-3 under 35 U.S.C. §102/103(a):**

Claims 1-3 have been rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP0800114 (EP'114).

The Examiner states that the material of EP'114, in Table 1, pages 31-35, contains multiple hydrophilic colloid layers comprising a blue sensitive layer, a green sensitive layer and a red sensitive layer, wherein the amount of silver halide in the element is  $3.957 \text{ g/m}^2$ . The Examiner further notes an amount of photosensitive silver halide in the range of  $0.05$  to  $20 \text{ g/m}^2$ , more preferably  $0.1$  to  $10 \text{ g/m}^2$ , as disclosed on page 16, lines 30-33. The Examiner alleges, therefore, that EP'114 exemplifies the amount of silver halide in the element within the scope of the claimed invention. Alternatively, the Examiner alleges it would have been obvious to the worker of ordinary skill in the art to use the amount of silver halide suggested therein.

This rejection is respectfully traversed. Although EP'114 discloses a similar level of silver halide in a photothermographic film, EP'114 involves a completely different film that, after imagewise exposure, cannot be thermally developed in a dry state without the application of solvents or aqueous solutions. (EP'114 requires a processing material which is superimposed on the film while heating, which material provides a solvent or water and certain reagents, after which the material is peeled from the film.) Consistent with this fact, the element or film according to the present invention, the presence of the organic silver salt is necessary for completely dry thermal development. Although EP'114 mentions in one paragraph (page 13) that an organic silver salt "can" be use with respect to a "first photosensitive material," as compared to a second and third photosensitive material, EP'114 actually uses no non-light sensitive silver salt oxidizing agent organic silver in any of the examples, specifically in none of the examples where the silver halide is present in an amount of  $1$  to  $4.0 \text{ g/m}^2$ . Thus, the Examiner would need to "pick and choose" separate, disparate items from several different embodiments described in the 71-page specification of EP'114 in order to

rearrange and reinvent what is taught by EP'114 in order to arrive nearer to Applicants' invention as now defined by claim 10, and still the Examiner would not arrive at the invention of claim 1, which is directed to a film, that following completely dry thermal development, forms a  $D_{\min}$  density of no more than 2.0, a  $D_{\max}$  density of no more than 4.0 and a  $D_{\max} - D_{\min}$  density change of at least 1.0 in each color record.

**Rejection of Claims 4-9 under 35 U.S.C. §35 U.S.C. 103(a):**

Claims 4-9 have been rejected under 35 U.S.C. 103(a) as being unpatentable over EP'114 as applied to claims 1-3 above, and further in view of Bohan et al (Bohan).

The Examiner states that Bohan discloses the use of color masking coupler, incorporated permanent  $D_{\min}$  adjusting dye within the amount the amount of up to 0.05 mmol/m<sup>2</sup> and amount up to 0.02 mmol/m<sup>2</sup>; an optical density after processing of less than 0.05 on the average to red, green, and blue light in column 10, lines 45-54; and, in column 7, the use of silver halide having grain thickness of 0.5  $\mu\text{m}$  or less. In column 11, lines 9-14, it is disclosed that limiting the amount of color masking couplers and incorporated permanent  $D_{\min}$  dye serves to reduce the optical density of the film and to improve scanning and digitations of the imagewise exposed and process film. The Examiner, therefore, concludes that it would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the color masking coupler and the incorporated permanent  $D_{\min}$  dye in combination with silver halide grains having thickness taught in Bohan to reduce the optical density of the film and to improve scanning and digitations of the imagewise exposed and process film, and thereby provide an invention as claimed.

Applicants submit that remaining dependent claims 4 and 5 are patentable for the reason that they depend from the remaining independent claim 1, for the reasons stated above.

**Rejection of Claims 1, 4-15, and 19-20 under 35 U.S.C. §35 U.S.C. 102(b):**

Claims 1, 4-15 19-20 have been rejected under 35 U.S.C. 102(b) as being anticipated by Bohan et al (Bohan). The Examiner states that Bohan in example 1, in column 18, discloses a photographic film sample 1 which contains blue, green and red silver halide emulsion layers having a total amount of silver

halide of  $4.04 \text{ g/m}^2$  which is within the scope of  $1.4$  to  $4.5 \text{ g/m}^2$ , average grain thickness of  $0.06 \text{ }\mu\text{m}$ ,  $0.09 \text{ }\mu\text{m}$  and  $0.14 \text{ }\mu\text{m}$ ; in column 38, an amount of color masking dye of up to  $0.05 \text{ mmol/m}^2$ ; in column 38 and claim 10, incorporated permanent Dmin adjusting dye in an amount up to  $0.02 \text{ mmol/m}^2$ . The Examiner notes also the amount of color masking dye and incorporated permanent Dmin adjusting dye in column 5, lines 60-65, and an optical density after processing of less than 0.05 on the average to red, green, and blue light in column 10, lines 45-54. The Examiner states that color development is carried out at temperature of from about  $40^\circ\text{C}$  to  $60^\circ\text{C}$  (column 38, claims 14), the scanning process can be performed after color development, and the desilvering after color development is optional (Abstract). The Examiner states that since the material of Bohan is developed at the temperature of  $40^\circ\text{C}$  to  $60^\circ\text{C}$ , this material is considered as a photothermographic material within the meaning of the claimed color photothermographic material.

This rejection is respectfully traversed. As indicated above, the present claim 1 has now been amended to require that the radiation sensitive silver-halide emulsion imaging layers comprise a blocked developer, a light sensitive silver halide emulsion, and a non-light sensitive silver salt oxidizing agent, wherein the fraction of silver as silver halide relative to total silver (including both silver halide and silver donor) is from 30 to 85% by weight, and wherein the amount of silver halide in the element is  $1$  to  $4.0 \text{ g/m}^2$ . Furthermore, the photothermographic element is a film designed for scanning with film scanners such that, following completely dry thermal development at a temperature of  $100$  to  $160^\circ\text{C}$ , the film forms a  $D_{\min}$  density of no more than 2.0, a  $D_{\max}$  density of no more than 4.0 and a  $D_{\max} - D_{\min}$  density change of at least 1.0 in each color record. Accordingly, Bohan is no longer believed relevant.

**Rejection of Claim 10-16 and 18 under 35 U.S.C. §37 U.S.C. 102(a):**

Claims 10-16 and 18 have been rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP0800114 (EP'114).

This rejection is believed moot in view of the cancellation of claims 6 to 20.

**Rejection of Claims 19-20 under 35 U.S.C. §35 U.S.C. 103(a):**

Claims 19-20 have been rejected under 35 U.S.C. 103(a) as being unpatentable over EP'114 as applied to claims 10-16, 18 above, and further in view of Bohan et al (Bohan).

This rejection is also believed moot in view of the cancellation of claims 6 to 20.

**Rejection of Claim 17 under 35 U.S.C. 103(a):**

Claim 17 has been rejected under 35 U.S.C. 103(a) as being unpatentable over EP'114 as applied to claims 10-16, 18 above, and further in view of Sato et al (Sato).

This rejection is also believed moot in view of the cancellation of claims 6 to 20.

**Double Patenting:**

Claims 1-16 have been provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 10-16, 21-23 of copending application no. 09/855,051

This rejection is also believed moot in view of the cancellation of claims 6 to 20.

It is believed that the foregoing is a complete response to the Office Action and that the claims are in condition for allowance. Favorable reconsideration and early passage to issue is therefore earnestly solicited.

Attached hereto is a marked up version of the changes made to the claims by the current amendment. The attached page(s) is captioned "**Version With Markings To Show Changes Made.**"

Respectfully submitted,



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**Version With Markings To Show Changes Made**

**In the Claims:**

Please cancel claims 6 to 20.

Please amend claims 1 and 5 as set forth below:

-- 1. A color photothermographic element for accurately recording a scene as an image comprising a support and coated on the support a plurality of hydrophilic colloid layers comprising radiation sensitive silver-halide emulsion layers forming recording layer units for separately recording blue, green, and red exposures wherein the imaging layers comprise a blocked developer, a light sensitive silver halide emulsion, and a non-light sensitive silver salt oxidizing agent, wherein the fraction of silver as silver halide relative to total silver is from 30 to 85% by weight, and wherein the amount of silver halide in the element is 1 to 4.0 g/m<sup>2</sup>, and wherein the photothermographic element is a film designed for scanning with film scanners such that a D<sub>min</sub> density of no more than 2.0, a D<sub>max</sub> density of no more than 4.0 and a D<sub>max</sub> - D<sub>min</sub> density change of at least 1.0 is formed in each color record after thermal development at a temperature of 100°C to 160°C.  
~~the amount of silver halide in the element is 1 to 4.5 g/m<sup>2</sup>.~~

5. The color photothermographic element of claim 4, wherein the grain thickness is ~~>greater than~~ 0.08, ~~most preferable >~~ 0.10 microns. --